

**TRANSLATION**

**PATENT COOPERATION TREATY**

**PCT**

**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>44 667</b>	<b>FOR FURTHER ACTION</b>	See Form PCT/IPEA/416
International application No. <b>PCT/EP2004/013838</b>	International filing date ( <i>day/month/year</i> ) <b>06.12.2004</b>	Priority date ( <i>day/month/year</i> ) <b>09.12.2003</b>
International Patent Classification (IPC) or national classification and IPC <b>H01L21/68</b>		
Applicant <b>SCHUNK KOHLENSTOFFTECHNIK GMBH</b>		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of <u>5</u> sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising: a. <input checked="" type="checkbox"/> ( <i>sent to the applicant and to the International Bureau</i> ) a total of <u>6</u> sheets, as follows: <input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. b. <input type="checkbox"/> ( <i>sent to the International Bureau only</i> ) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).
4. This report contains indications relating to the following items: <input checked="" type="checkbox"/> Box No. I Basis of the report <input type="checkbox"/> Box No. II Priority <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input type="checkbox"/> Box No. VII Certain defects in the international application <input type="checkbox"/> Box No. VIII Certain observations on the international application

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/013838

## Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 2, 4, 6-11 as originally filed/furnished
- pages\* 1, 3, 5 received by this Authority on 14.10.2005 with telefax
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☒ the claims:
- nos. \_\_\_\_\_ as originally filed/furnished
- nos.\* \_\_\_\_\_ as amended (together with any statement) under Article 19
- nos.\* 1-14 received by this Authority on 14.10.2005 with telefax
- nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☒ the drawings:
- sheets 1/3-3/3 as originally filed/furnished
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/013838

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1. Statement			
Novelty (N)	Claims		YES
	Claims	1-19	NO
Inventive step (IS)	Claims		YES
	Claims	1-19	NO
Industrial applicability (IA)	Claims	1-19	YES
	Claims		NO
2. Citations and explanations (Rule 70.7)			
<p>This report makes reference to the communication of 13 October 2005 in response to the report dated 17 August 2005.</p> <p>The detailed response of the applicant's representative has been taken into account.</p> <p>1. With reference to the new claim 1:</p> <p>The amendments submitted with the aforementioned letter introduce substantive matter which, contrary to PCT Article 34(2)(b), goes beyond the disclosure in the international application as filed. The amendments are as follows:</p> <p>"gas outlet or throughflow openings are formed by the porosity of the support". It is not only the support material that determines the size of the openings but also the deposited layers (in the application 26 and 28) - which is exactly as in US6444027. This phrase does not restrict the scope of the claim. Drilled holes are not excluded.</p> <p style="text-align: right;">/...</p>			

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

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Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

The explanations submitted by the applicant's representative relate basically to the interpretation of the expression "porous". It should be noted here that document US6444027, likewise, refers to a "porous surface" (see column 5, lines 1-10), which - in direct translation - corresponds to the subject matter of the present application. This is taken as at least an indication of the difficulty of interpreting the term without ambiguity. In D1, too, "gas outlet openings or gas passage openings" are formed by "the porosity of the support" - or however this might be worded in accordance with PCT Article 34(2).

The diagram in figure 1, in particular shows the support. The term "porous surface" relates to a sub-region 9 of the support 2. The way in which a structure of this type is produced is of no relevance in a device claim. Furthermore, the material mix is also disclosed and a special exemplary application given (column 5, lines 52 to column 9, line 20). Owing to its composition, graphite will always have a fibrous structure, however fine the fibres may be - but the present application makes no reference to this. According to the present application, the porosity region is very broad and the density for the same material will be the same or at least within the given specifications. A direct comparison with the

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Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

prior art is not straightforward in this respect, particularly since the application gives a person skilled in the art no guidance as to how to determine the corresponding parameters.

It remains to be emphasised that, in the light of the above observations, the present claim 1 cannot be considered to be supported by the description nor can the full scope of said claim be considered adequately disclosed since the drilling of holes is not actually mentioned in the description but the present claims do not exclude this alternative.

2. With reference to the new claim 9:

The present wording does not exclude the drilling of holes. The method steps: "the manufacture of the support structure..." and "the stabilisation..." are so general that the method applied in D1 could also be covered (see the passages cited above).

3. The objections raised previously were therefore upheld.